



## OFFICE OF SCIENCE AND TECHNOLOGY POLICY

### Critical and Strategic Materials Supply Chains

**ACTION:** Notice of Request for Information.

**SUMMARY:** The U.S. economy's requirements for raw materials have and will change over time, especially with the introduction of new products and processing technologies.

Furthermore, as the global economy grows, there are increasing concerns regarding the availability and access to the raw materials that will be necessary to sustain U.S. economic growth and advance other national policies. As the criticality of materials shifts over time, studying the early warning signs and the underlying forces of potential material supply disruption can inform proactive policy development for emerging critical materials. One of the roles of the Critical and Strategic Minerals Supply Chain Subcommittee (CSMSC Subcommittee) of the National Science and Technology Council's Committee on Environment, Natural Resources, and Sustainability is to develop a methodology for identifying critical materials and monitoring changes in criticality on an ongoing basis, providing "early warning" to policymakers and other stakeholders. The views of U.S. industry and other stakeholders are important to inform both an understanding of current conditions and the characterization of anticipated future demand for critical materials.

**DATES:** Responses must be received by August 31, 2014, to be considered.

**ADDRESSES:** You may submit comments by any of the following methods:

- E-mail: [criticalmaterials@ostp.gov](mailto:criticalmaterials@ostp.gov). Include [*Critical and Strategic Materials Supply Chains*] in the subject line of the message.
- Fax: (202) 456-6071, Attn: Cyrus Wadia.

- Mail: Attn: Cyrus Wadia, Office of Science and Technology Policy, Eisenhower Executive Office Building, 1650 Pennsylvania Ave, NW, Washington, DC 20504.

*Instructions:* Electronic responses must be provided as attachments to an email. It is recommended that attachments with file sizes exceeding 25MB be compressed (i.e., zipped) to ensure message delivery. Please identify your answers by responding to a specific question or topic if possible. Respondents may answer as many or as few questions as they wish. Any information obtained as a result of this RFI is intended to be used by the Government on a non-attribution basis for planning and strategy development. OSTP will review the responses in its formulation of program strategies for the identified materials of interest that are the subject of this request.

OSTP will not respond to individual submissions or publish publicly a compendium of responses, except as required by applicable law. A response to this RFI will not be viewed as a binding commitment to develop or pursue the project or ideas discussed. OSTP will not pay for information provided under this RFI. This RFI is not accepting applications for financial assistance or financial incentives. OSTP has no obligation to respond to those who submit comments, and/or give any feedback on any decision made based on the responses received.

**FOR FURTHER INFORMATION CONTACT:**

Cyrus Wadia, (202) 456-4444, [criticalmaterials@ostp.gov](mailto:criticalmaterials@ostp.gov)

<http://www.whitehouse.gov/administration/eop/ostp>.

**SUPPLEMENTARY INFORMATION:**

PURPOSE: The purpose of this RFI is to solicit feedback from industry, academia, research laboratories, government agencies, and other stakeholders on issues related to demand, supply and supply chain structure, R&D, and technology transitions related to raw materials (including, but not limited to, minerals and gases) used in the U.S. economy. The Office of Science and Technology Policy (OSTP), which co-chairs the NSTC's Committee on Environment, Natural Resources, and Sustainability, is specifically interested in information on raw materials of interest to the public. Input on the current and future production of and demand for relevant materials, concerns related to raw material availability, and overall market dynamics are topics of additional relevance, as are the role of emerging technologies, trends in nationally important sectors and global shifts in product markets.

#### REQUEST FOR INFORMATION CATEGORIES:

##### **Category 1: Demand**

- What materials will be particularly important, and of concern (due to availability, price, etc.) to your technologies and/or your industry over the next 5 years?
- What is the growth in demand forecast for your technologies? What factors drive this assessment?
- At what point(s) in technology or product development or manufacturing do you select raw materials? How do you consider price? How do you consider performance characteristics? How do you consider availability?
- What investments, if any, are you making to identify raw material input alternatives?

- Are there any emerging disruptive technologies or technology transitions (e.g., new applications or substitutes) that would dramatically change demand in the near term (5 years) or long term (15 years)?

## **Category 2: Exploration, Mining, and Smelting/Refining**

- What barriers exist to exploration for additional resources of raw materials in the United States and globally?
- Once discovered, what barriers exist to the timely development of raw materials in the United States and globally?
- Is current North American separation, smelting, and/or refining capacity adequate to ensure reliable material supplies?
- What innovations in separation, smelting/refining technology or processes might affect U.S. or global resource supplies? What are the environmental impacts of these innovations?
- Are the mining, separation, smelting, and/or refining sites of the minerals required for your technologies adequately diversified to account for potential market failures or political risks?
- How do market size, market price, capital availability and other economic factors affect production decisions?

## **Category 3: Supply and Supply Chain**

- What are the supply chains for the technologies identified as being important to your manufacturing processes and industry? How would you describe the significant stages of the supply chain?

- Are there vulnerabilities in the supply chain (domestic, foreign, sole source, import reliance, etc.) that lead to concerns regarding the supply of any of these materials and/or the ability to manufacture these technologies?
- How do you assess supply chain vulnerabilities and their impact?

#### **Category 4: Market Dynamics**

- How would you describe the market dynamics of your supply chains, including the overall supply of materials of interest?
- Are there any market distortions in the supply chain, such as opacity, lack of information, or trade-related distortions?
- Is there price volatility? If so, what factors drive this volatility?

#### **Category 5: Mitigation**

- What are some strategies you employ to mitigate supply chain concerns? (e.g., stockpiles, hedging, etc.)
- How do you cope with price volatility?
- Do you consider using technologies available with slightly reduced performance to avoid price and availability concerns?

#### **Category 6: Other**

- Is there additional information, not requested above, that you believe the CSMSC Subcommittee should consider in identifying emerging critical materials? If so, please provide here.

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Ted Wackler, Deputy Chief of Staff and Assistant Director

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